

WHAT IS CLAIMED IS:

1. A computer-assisted external fixation apparatus, comprising:  
a storage medium for storing an external fixation application which, when executed by a processor, displays a series of interface images for assisting a user with an external fixation procedure.
2. The apparatus of Claim 1, wherein the external fixation application is adapted to cooperate with a tracking system to acquire kinematic data of a subject joint and determine a kinematic parameter associated with the subject joint.
3. The apparatus of Claim 1, wherein the external fixation application is adapted to display a virtual representation of a joint for performing the external fixation procedure.
4. The apparatus of Claim 1, wherein the external fixation application is adapted to identify a kinematic parameter for a particular joint in response to a selection of the particular joint by a user.
5. The apparatus of Claim 1, wherein the external fixation application is adapted to cooperate with a tracking system to provide real-time alignment data for aligning a fixation device with a determined kinematic parameter of a subject joint.
6. The apparatus of Claim 1, wherein the external fixation application is adapted to determine a kinematic manipulation requirement for a joint in response to a selection of the joint by a user to receive the external fixation procedure.
7. The apparatus of Claim 1, wherein the external fixation application is adapted to display a virtual representation of a subject joint in response to a selection of the joint by a user to receive the external fixation procedure.

8. The apparatus of Claim 1, wherein the external fixation application is adapted to cooperate with a tracking system to display, in real time, a kinematic parameter of a fixation device relative to a subject joint.

9. The apparatus of Claim 1, wherein the external fixation application is adapted to display subject image data corresponding to a joint to receive the external fixation procedure.

10. The apparatus of Claim 1, wherein the external fixation application is adapted to cooperate with a tracking system to receive a target kinematic parameter for a subject joint based on subject image data of the subject joint.

11. The apparatus of Claim 10, wherein the external fixation application is adapted to display alignment data of the target kinematic parameter relative to a kinematic parameter based on physical manipulation of the subject joint.

12. The apparatus of Claim 1, wherein the external fixation application is adapted to cooperate with a tracking system to acquire a plurality of kinematic data points over a range of kinematic movement associated with a subject joint.

13. A computer-assisted surgery system, comprising:  
a display device; and  
an external fixation application executable by a processor and adapted to display a series of interface images on the display device for assisting a user to perform an external fixation procedure.

14. The system of Claim 13, wherein the external fixation application is adapted to display a virtual representation of a joint to receive the external fixation procedure on the display device.

15. The system of Claim 13, wherein external fixation application is adapted to cooperate with a tracking system to acquire kinematic data associated with movement of a subject joint and determine a kinematic parameter for the subject joint using the kinematic data.

16. The system of Claim 15, wherein the external fixation application is adapted to display the determined kinematic parameter on the display device.

17. The system of Claim 13, wherein the external fixation application is adapted to cooperate with a tracking system to provide real-time alignment data of a kinematic parameter of a fixation device relative to a kinematic parameter of a subject joint.

18. The system of Claim 13, wherein the external fixation application is adapted to list a plurality of different joints to the user for selection of one of the listed joints by the user to receive the external fixation procedure.

19. The system of Claim 18, wherein the external fixation application is adapted to identify at least one kinematic parameter for the joint selected by the user.

20. The system of Claim 13, wherein the external fixation application is adapted to cooperate with a tracking system to receive a target kinematic parameter for a subject joint based on subject image data of the subject joint.

21. The system of Claim 20, wherein the external fixation application is adapted to display alignment data of the target kinematic parameter relative to a kinematic parameter based on physical manipulation of the subject joint.